



AXIOMTEK

GOT812LR-834

**12.1" XGA TFT IP66-rating
Touch Panel Computer**

User's Manual



Disclaimers

This manual has been carefully checked and believed to contain accurate information. Axiomtek Co., Ltd. assumes no responsibility for any infringements of patents or any third party's rights, and any liability arising from such use.

Axiomtek does not warrant or assume any legal liability or responsibility for the accuracy, completeness or usefulness of any information in this document. Axiomtek does not make any commitment to update the information in this manual.

Axiomtek reserves the right to change or revise this document and/or product at any time without notice.

No part of this document may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Axiomtek Co., Ltd.

©Copyright 2014 Axiomtek Co., Ltd.

All Rights Reserved

Aug 2014, Version A1

Printed in Taiwan



The GOT812LR-834 is compliant by IEC60945, it is 10~30V power adapter, COM and USB by Keyboard and Mouse.

Note

Safety Precautions

Before getting started, please read the following important safety precautions.

1. The GOT812LR-834 does not come equipped with an operating system. An operating system must be loaded first before installing any software into the computer.
2. Be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and place all electronic components in any static-shielded devices. Most electronic components are sensitive to static electrical charge.
3. Disconnect the power cord from the GOT812LR-834 before any installation. Be sure both the system and external devices are turned OFF. A sudden surge of power could ruin sensitive components that the GOT812LR-834 must be properly grounded.
4. The brightness of the flat panel display will be getting weaker as a result of frequent usage. However, the operating period varies depending on the application environment.
5. Turn OFF the system power before cleaning. Clean the system using a cloth only. Do not spray any liquid cleaner directly onto the screen. The GOT812LR-834 may come with or w/o a touchscreen. Although the touchscreen is chemical resistant, it is recommended that you spray the liquid cleaner on a cloth first before wiping the screen. In case your system comes without the touchscreen, you must follow the same procedure and not spray any cleaner on the flat panel directly.
6. Avoid using sharp objects to operate the touchscreen. Scratches on the touchscreen may cause malfunction or internal failure to the touchscreen.
7. The flat panel display is not susceptible to shock or vibration. When assembling the GOT812LR-834, make sure it is securely installed.
8. Do not open the system's back cover. If opening the cover for maintenance is a must, only a trained technician is allowed to do so. Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:
 - Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.
 - When handling boards and components, wear a wrist-grounding strap, available from most electronic component stores.

Trademarks Acknowledgments

Axiomtek is a trademark of Axiomtek Co., Ltd. IBM, PC/AT, PS/2, VGA are trademarks of International Business Machines Corporation.

Intel® and Atom™ are registered trademarks of Intel Corporation.

MS-DOS, Microsoft C and Quick BASIC are trademarks of Microsoft Corporation.

VIA is a trademark of VIA Technologies, Inc.

SST is a trademark of Silicon Storage Technology, Inc.

UMC is a trademark of United Microelectronics Corporation. Other brand names and trademarks are the properties and registered brands of their respective owners.

Table of Contents

Disclaimers	i
Safety Precautions	iii
CHAPTER 1 Introduction	1
1.1 General Description	1
1.2 Specifications.....	2
1.2.1 Main CPU Board	2
1.2.2 I/O System	2
1.2.3 System Specification.....	3
1.3 Dimensions.....	4
1.4 I/O Outlets.....	5
1.5 Package List	6
CHAPTER 2 System Configurations.....	7
2.1 I/O Pin Assignment	7
2.1.1 Serial Port Interface	7
2.1.3 Ethernet	8
2.2 Water-proof Cables	9
2.2.1 Power cable	9
2.2.2 Power adapter for GOT812LR-834.....	10
2.2.3 COM.....	10
2.2.4 USB cables	11
2.3 Mounting Method	11
2.3.1 VESA mounting.....	11
2.3.2 VESA-ARM Mounting.....	12
CHAPTER 3 AMI BIOS Setup Utility	14
3.1 Navigation Keys	14
3.2 Main Menu.....	15
3.3 Advanced Menu.....	16
3.4 Chipset Menu.....	25
3.5 Security	28
3.6 Boot Menu.....	29
3.7 Save&Exit.....	30
CHAPTER 4 Drivers Installation.....	32
4.1 System	32
4.1.1 Win 7.....	32
4.1.2 Win 8/8.x.....	33
4.2 Touch Screen	34
4.2.1 Specification.....	34
4.2.2 Driver Installation- Windows 7/8.x	34
4.3 Embedded O.S.....	36
4.3.1 WES 7 & WE8S.....	36

This page is intentionally left blank.

CHAPTER 1

Introduction

This chapter contains general information and detailed specifications of the GOT812LR-834. Chapter 1 includes the following sections:

- General Description
- Specification
- Dimensions
- I/O Outlets
- Package List

1.1 General Description

The GOT812LR-834 is a fan-less and compact-size touch panel computer, equipped with a 12.1" High brightness TFT LCD display and low power consumption Intel® Atom™ E3827 1.75GHz processor. The GOT812LR-834 supports Windows® 7, Windows® CE.NET and Windows® embedded OSs. The panel computer is able to install a CFast™ and provided a Mini card slot for extension such as WIFI. Its excellent ID and friendly user interface make it a professional yet easy-to-use panel computer. The GOT812LR-834 is an ideal for space-limited applications in factory automation, machine maker operating systems, building automation, and more.

- **GOT812LR-834: 12.1" TFT XGA Fanless Touch Panel Computer**
 - Reliable and Stable Design
The GOT812LR-834 adopts a fanless cooling system and a CFast™, which makes it suitable for vibration environments, example for Marine and Crane.
 - Embedded O.S. Supported
The GOT812LR-834 not only supports Windows® 7 and Windows® 8/8.1., but also supports embedded OS, such as Windows® CE.NET, and Windows® 7/8/8.1 embedded. For storage device, the GOT812LR-834 supports CFast™ and 2.5" SSD device.
 - Industrial-grade Product Design
The GOT812LR-834 has an incredible design to be used in different industrial environments.
- **The whole enclosure meets the IP66 standard.**
- **For connecting other devices, the GOT812LR-834 also features several interfaces: USB, Ethernet, and RS-232/422/485.**

1.2 Specifications

1.2.1 Main CPU Board

- **CPU**
 - Intel® Atom™ E3827 1.75GHz processor onboard
- **System Memory**
 - One 204-pin DDR3L(1.35V) SO-DIMM socket
 - Maximum memory up to 8GB
- **BIOS**
 - America Megatrends BIOS

1.2.2 I/O System

- **Standard I/O**
 - 2 x RS-232/422/485(default RS-232)
 - 2 x USB 2.0 (M12 connector)
- **Ethernet**
 - One RTL8111E Gigabit Ethernet
- **Expansion**
 - Two Mini PCI-E card
- **Storage**
 - One CF slot or mSATA
 - One SATA interface

1.2.3 System Specification

- **12.1" TFT LCD**
 - 12.1" XGA 1000nits
- **Heat Dispensing Design**
- **Disk drive housing:**
 - One 2.5" SATA drive (optional)
- **Net Weight**
 - 4.6 Kgs (3.52 lb)
- **Dimension (Main Body Size)**
 - 296mm x 240mm x 59mm
- **Operation Temperature**
 - -20°C to 55°C
- **Relative Humidity**
 - 10% to 90% @ 40°C, Non-Condensing
- **Vibration**
 - 5 to 500 Hz, 2.0 G for CF card
 - 5 to 500 Hz, 2.0 G for SSD



Note

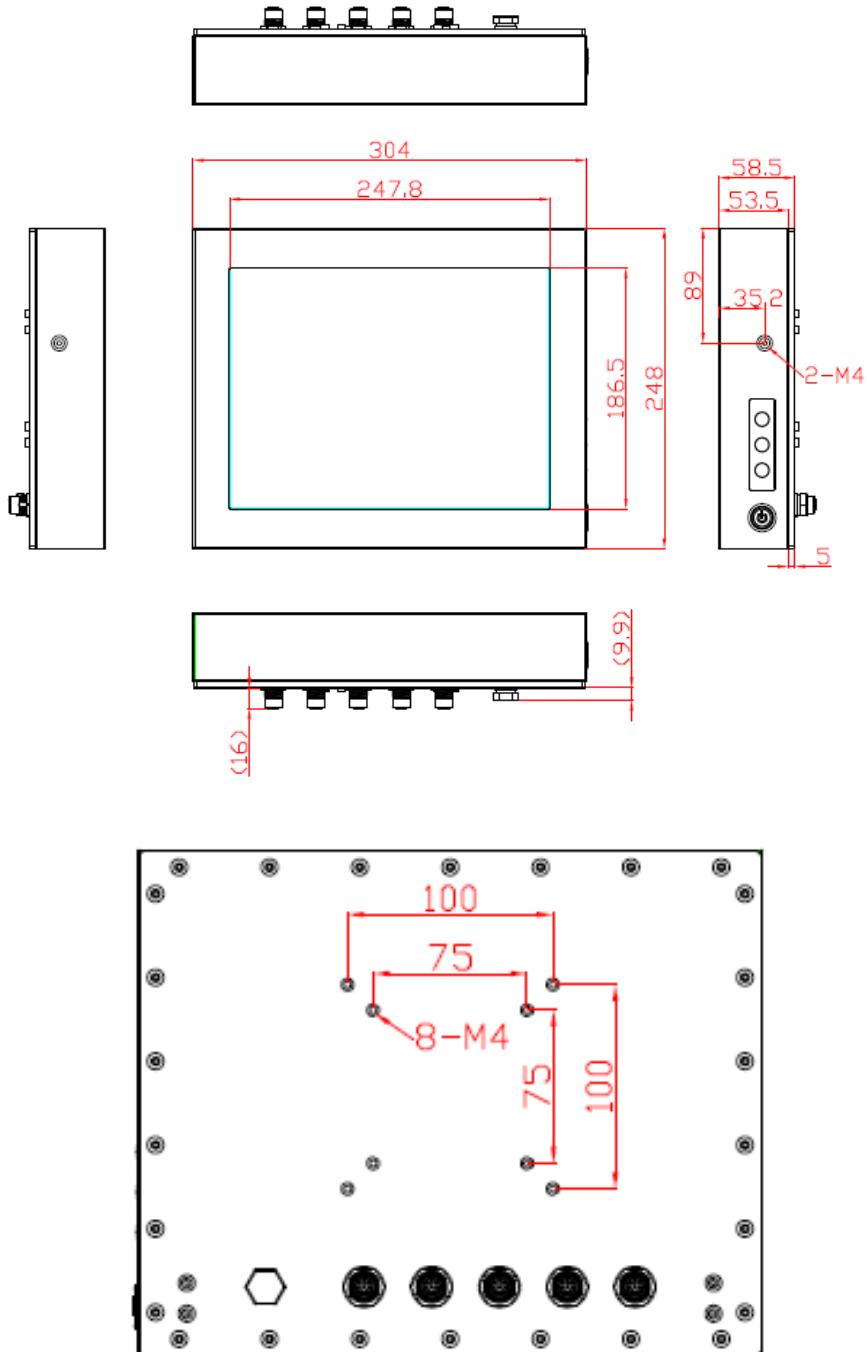
1. All specifications and images are subject to change without notice.
2. The GOT812LR-834 is suited on serious environment; please choose the wide temperature DRAM and SSD.
3. If the operation temperature is higher than 35°C, the wide temperature HDD is recommended to be used on the device.
4. If the operation temperature is higher than 45°C, the wide temperature CF and SSD are recommended to be used on the device.



Warning: According the warrantee is adopt for the IP66 guarantee, please choose CF,SSD and RAM by Axiomtek, also please kindly don't disassemble the system by yourself.

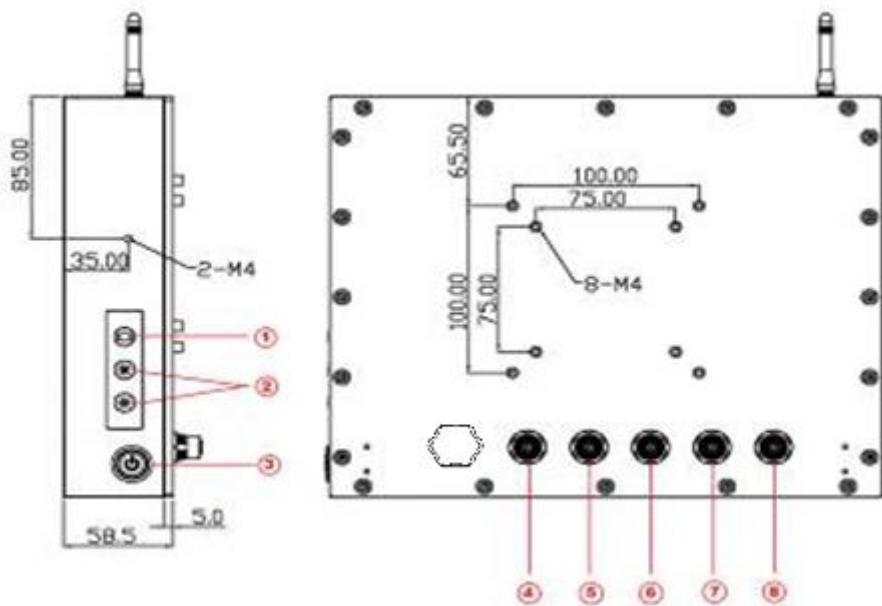
1.3 Dimensions

This diagram shows you dimensions and outlines of the GOT812LR-834.



1.4 I/O Outlets

Please refer to the following illustration for I/O locations of the GOT812LR-834.



No	Function
1	Backlight ON/OFF
2	Brightness Adjust
3	Power Switch(ATX)
4	DC power connector
5	COM1(configure RS422/485, default RS-232)
6	COM2(configure RS422/485, default RS-232)
7	Ethernet
8	USB2.0 × 2

1.5 Package List

When you receive the GOT812LR-834, the bundled package should contain the following items:

- **GOT812LR-834 x 1**
- **Driver CD x1**
- **DC cable x1**
- **Power Adapter (optional)**
- **Water-proof Power / USB / LAN / RS-232 cables (optional)**
- **VESA ARM(optional)**

If you can not find the package or any items are missing, please contact Axiomtek distributors immediately.

CHAPTER 2

System Configurations

The GOT812LR-834 provides rich I/O ports and flexible expansions for you to meet different demand, for example, CF. The chapter will show you how to install the hardware. It includes:

- I/O Pin Assignment
- Hard Disk and DRAM
- Wireless LAN Card (Optional)
- Water-proof cables (Optional)
- Hanging and VESA mounting (Optional)

2.1 I/O Pin Assignment

The GOT812LR-834 has two serial ports, COM1 and COM2 (RS-232/422/485, default RS-232) , Ethernet, USB, and DC-in 12V/24V connector.

2.1.1 Serial Port Interface

The following table shows you the pin assignments of this connector:

Pin	RS-232	RS-422	RS-485
1	DCD	TX-	Data-
2	RXD	TX+	Data+
3	TXD	RX+	No use
4	DTR	RX-	No use
5	GND	GND	GND
6	DSR	No use	No use
7	RTS	No use	No use
8	CTS	No use	No use
9	RI	No use	No use



Each port +5V Maximum: 2A, +12V Maximum: 1A.

Note



Warning: According to the warranty, please inform the COM1 setting when ordering, also please kindly don't disassemble the system by yourself.

2.1.3 Ethernet

The GOT812LR-834 is equipped with a high performance Plug and Play Ethernet interface, full compliant with IEEE 802.3 standard, and can be connected with a M12 LAN connector.

Please refer to detailed pin assignment list below:

Pin	Signal
1	TX+ (Data transmission positive)
2	TX- (Data transmission negative)
3	Rx+(Data reception positive)
4	RJ45 termination
5	RJ45 termination
6	Rx- (Data reception negative)
7	RJ45 termination
8	RJ45 termination



2.2 Water-proof Cables

GOT-800 series uses specific M12 connector for water-proof. Therefore you will order each cable base on application.

There are four kind cables of GOT812, by the optional, if you will apply the USB, COM or Etherent then you can select a cable for the package.

The Power cable included in the accessory box, when you will need the power adapter, also it can be selected by optional.

2.2.1 Power cable

Please follow pin assignment for the power input.



Pin	Signal
V+	DC 12V or 24V power input
	Earth Ground
GND	GND
GND	GND



2.2.2 Power adapter for GOT812LR-834

If you order the power adapter, you should choose the power cord type for your location. The power adapter is +12VDC(5A), 110-240V which is combined M12 connector.



2.2.3 COM

There are two COM cables which are combined M12 connector. Also, you can refer 2.1.1 for the Series port pin assignment.



2.2.4 USB cables

The USB cable is combined M12 connector for water-proof. It is extended two USB ports for applicaton.



2.3 Mounting Method

There are two mounting ways for the GOT812LR-834. One is suspension, the other is VESA mount.

2.3.1 VESA mounting

The GOT812 can accept both VESA 75 and VESA 100.



2.3.2 VESA-ARM Mounting

Step 1 Find out the 4 screws as marked on the back side of chassis.



Step 2 Assemble the VESA-ARM to the back side of the chassis, and fix the screws.



Step 3 VESA mounting Installation completed.



This page is intentionally left blank.

CHAPTER 3

AMI BIOS Setup Utility

This chapter provides users with detailed description how to set up basic system configuration through the AMIBIOS8 BIOS setup utility.

3.1 Navigation Keys

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process.

These keys include <F1>, <F2>, <F3>, <F4>, <Enter>, <ESC>, <Arrow> keys, and so on.



Some of navigation keys differ from one screen to another.

Note

← Left/Right	The Left and Right <Arrow> keys allow you to select a setup screen.
↑↓ Up/Down	The Up and Down <Arrow> keys allow you to select a setup screen or sub-screen.
+- Plus/Monus	The Plus and Minus <Arrow> keys allow you to change the field value of a particular setup item.
Tab	The <Tab> key allows you to select setup fields.
F1	The <F1> key allows you to display the General Help screen.
F2	The <F2> key allows you to load previous value
F3	The <F3> key allows you to Load Optimized Defaults.
F4	The <F4> key allows you to save any changes you have made and exit Setup. Press the <F4> key to save your changes.
Esc	The <Esc> key allows you to discard any changes you have made and exit the Setup. Press the <Esc> key to exit the setup without saving your changes.
Enter	The <Enter> key allows you to display or change the setup option listed for a particular setup item. The <Enter> key can also allow you to display the setup sub- screens.

3.2 Main Menu



System Time/Date

Use this option to change the system time and date. Highlight *System Time* or *System Date* using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time is entered in HH:MM:SS format.

3.3 Advanced Menu



The Advanced menu allows users to set configuration of the CPU and other system devices. You can select any of the items in the left frame of the screen to go to the sub menus:

- ACPI Settings
- NCT6106D Super IO Configuration
- NCT6106D H/W Monitor
- CPU Configuration
- IDE Configuration
- LPSS & SCC Configuration
- Security Configuration

For items marked with “▶”, please press <Enter> for more options.’

- **ACPI Settings**

You can use this screen to select options for the ACPI Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen.

ACPI Sleep State

Allow you to select the Advanced Configuration and Power Interface (ACPI) state to be used for system suspend. Here are the options for your selection, Suspend disable and S3 (Suspend to RAM).



- **NCT6106D Super IO Configuration**

Use this screen to select options for the Super IO Configuration, and change the value of the selected option



Serial Port 1-4 configuration

Serial port:

This option used to enable or disable the serial port.

Device Setting:

This item specifies the base I/O port address and Interrupt Request address of serial port.

The port 0 Optimal setting is 3F8/IRQ4.

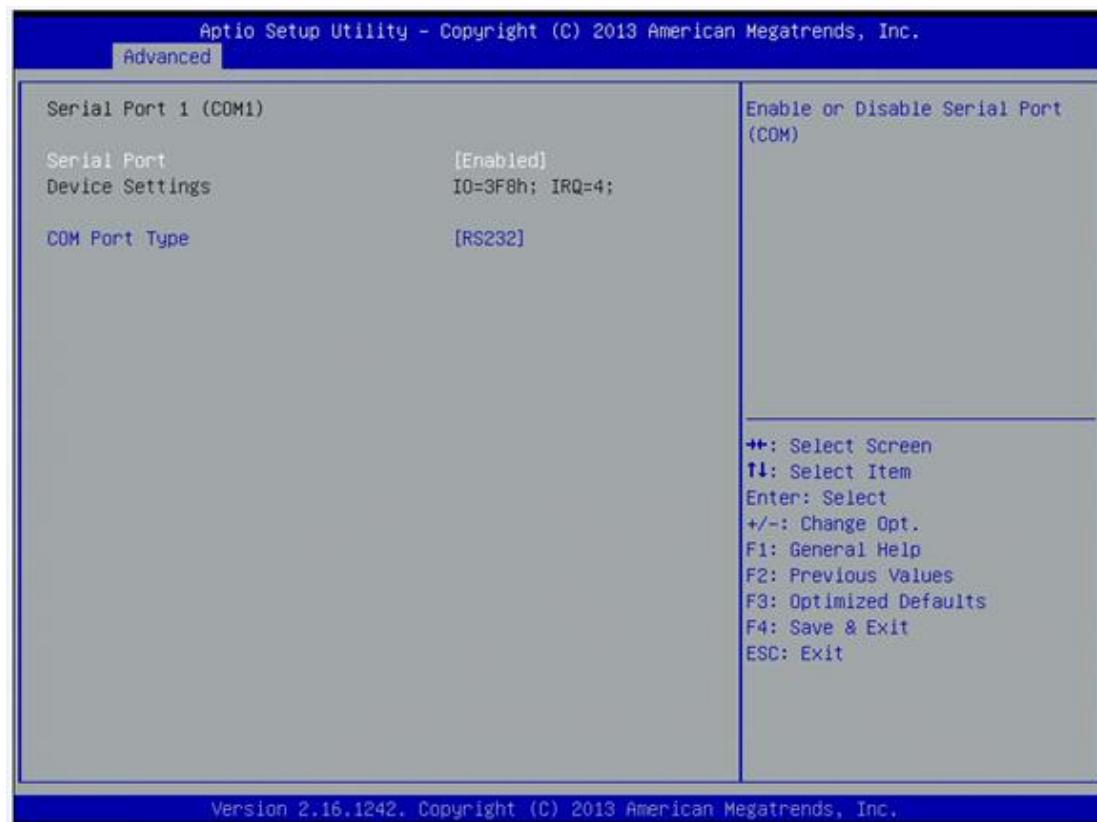
The port 1 Optimal setting is 2F8/IRQ3.

The port 2 Optimal setting is 3E8/IRQ7

The port 3 Optimal setting is 2E8/IRQ5.

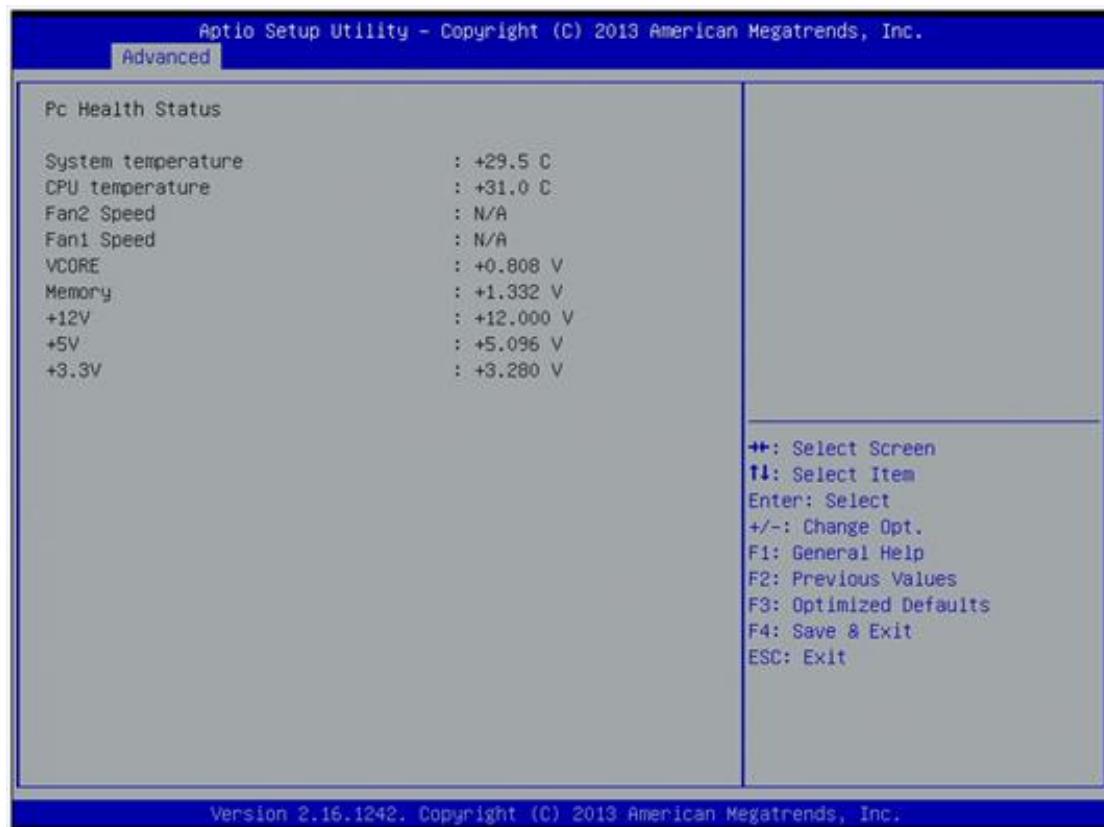
- **Serial type**

This option used to select RS232/422/485 function.



● **NCT6106D H/W Monitor**

This screen shows the Hardware Health Configuration.



- **CPU Configuration**

This screen shows the CPU Configuration and Intel virtualization technology enable/disable selected

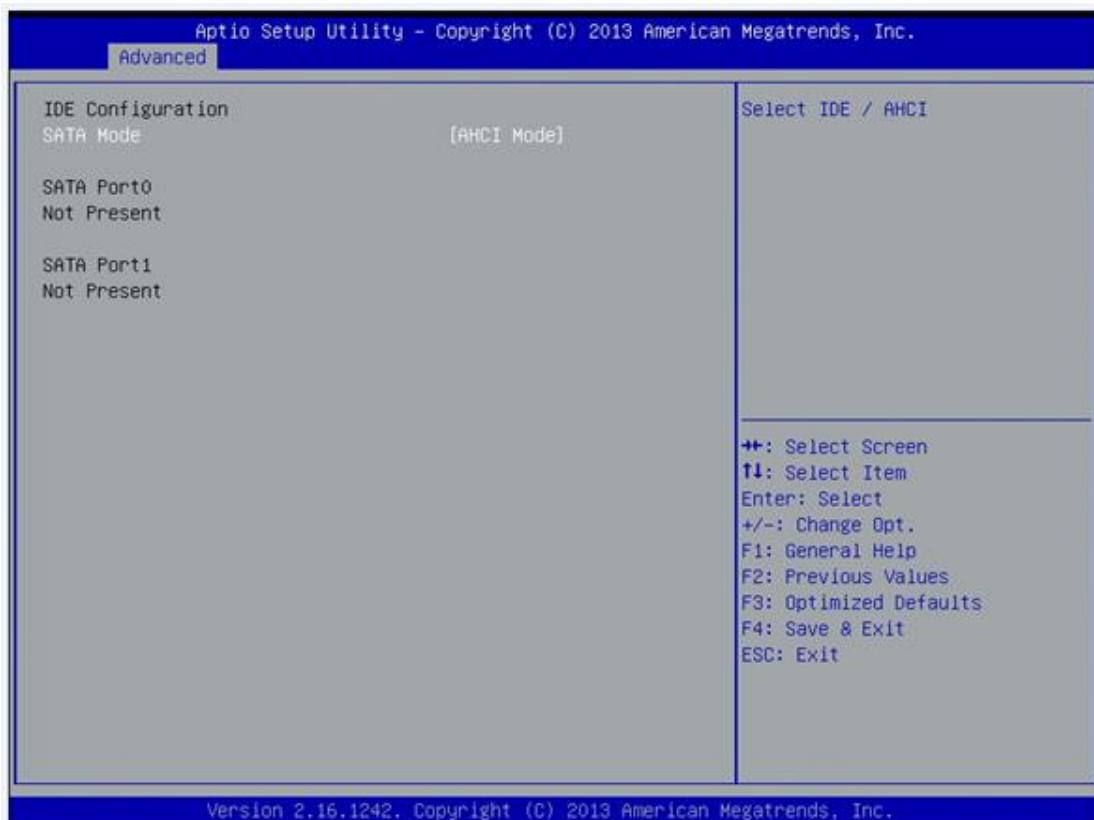


- **IDE Configuration**

You can use this screen to select options for the SATA Configuration, and change the value of the selected option.

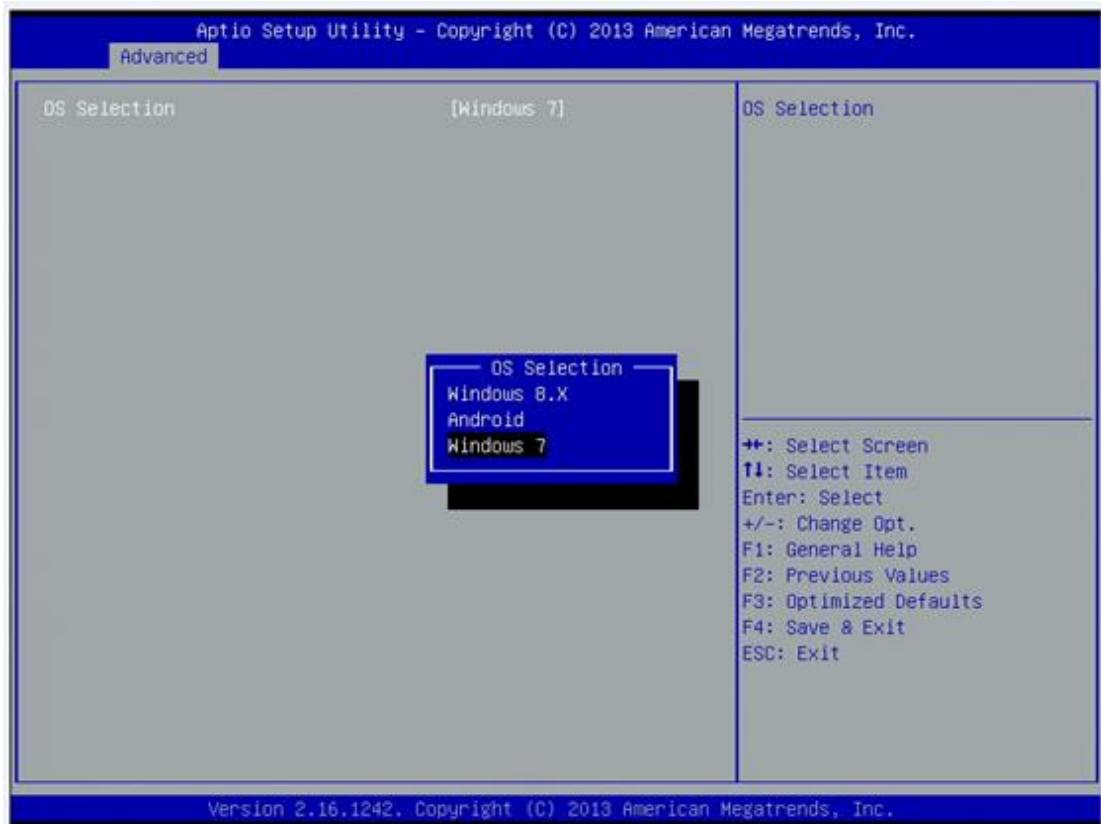
- **SATA Mode**

Use this item to choose the SATA operation mode. Here are the options for your selection, IDE Mode, AHCI Mode.



- **LPSS & SCC Configuration**

You can select any of the items in the frame of the screen to change the OS, the default setting is Win 7.

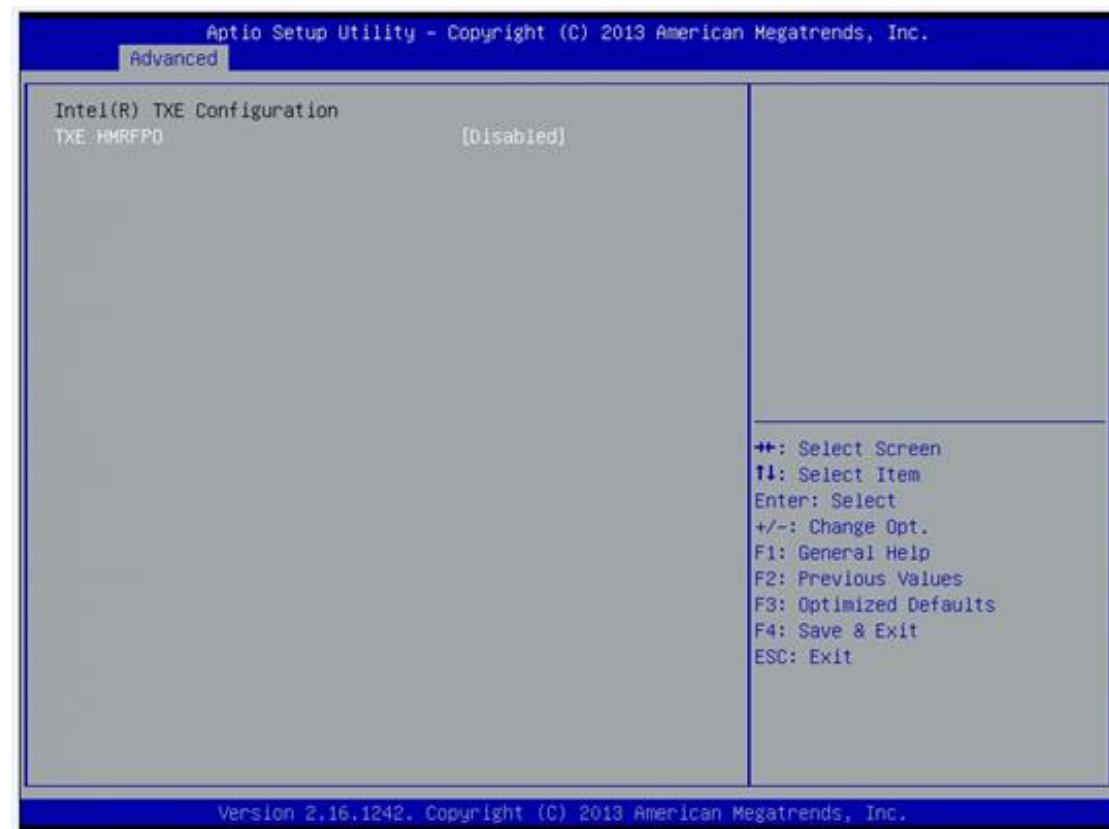


Please be informed to select the Windows 8.x when installing Win 8 or Win 8.1.

- If using the Android OS, please refer to <https://01.org/android-ia>.

● Intel TXE Configuration

The Advanced menu allows users to update the TXE firmware.



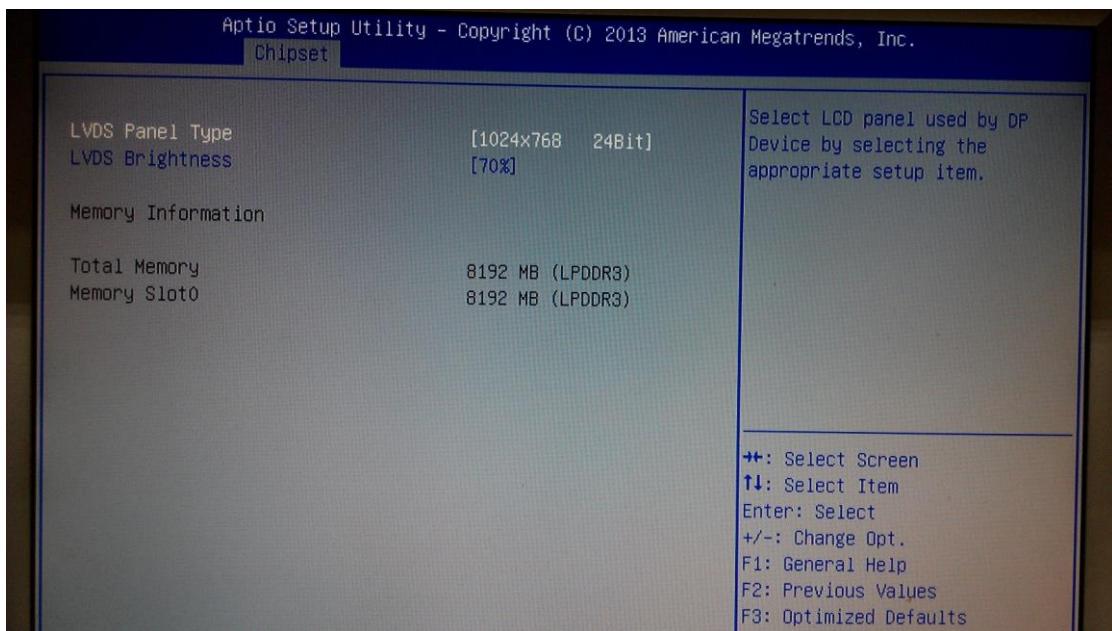
3.4 Chipset Menu

The Chipset menu allows users to change the advanced chipset settings.



- **North Bridge**

This screen shows the North Bridge memory information.

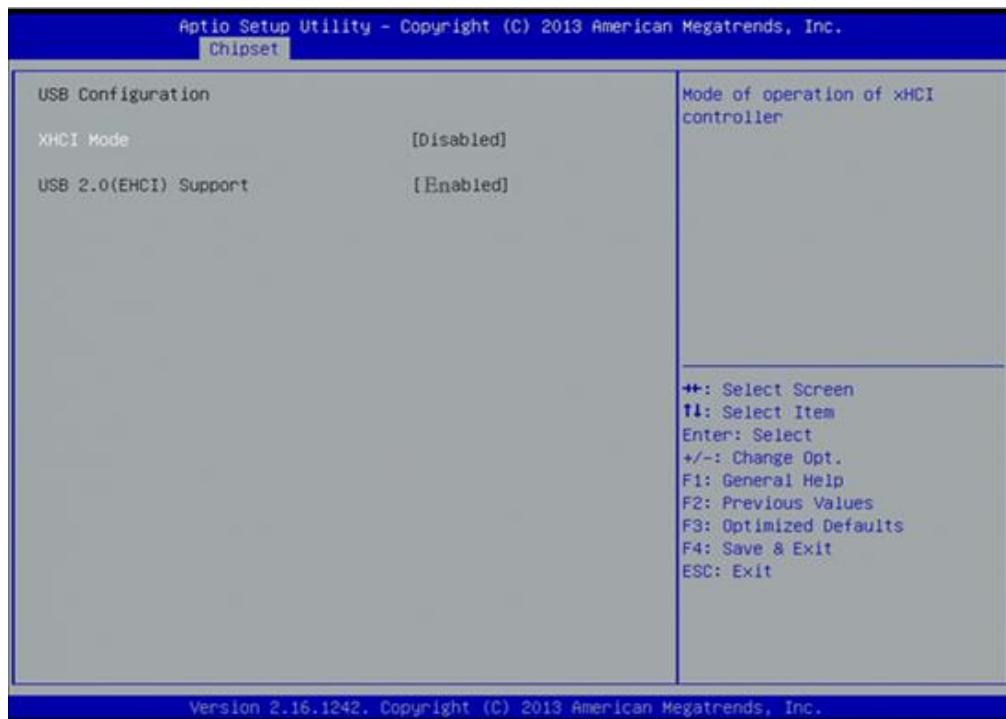


- **South Bridge**



- **USB Configuration**

You can use this screen to select options for the USB Configuration,
If USB3.0 function used, XHCI Mode must disable and EHCI must enable.



Suggest that don't adjust the items if not necessary.

Note

3.5 Security



3.6 Boot Menu

The Boot menu allows users to change boot options of the system. You can select any of the items in the left frame of the screen to go to the sub menus:



Setup Prompt Timeout

Set the Timeout for wait press key to enter Setup Menu.

Bootup NumLock State

Use this item to select the power-on state for the NumLock. The default setting is on.

Quiet Boot

Use this item to enable or disable the Quite Boot state. The default setting is disable.

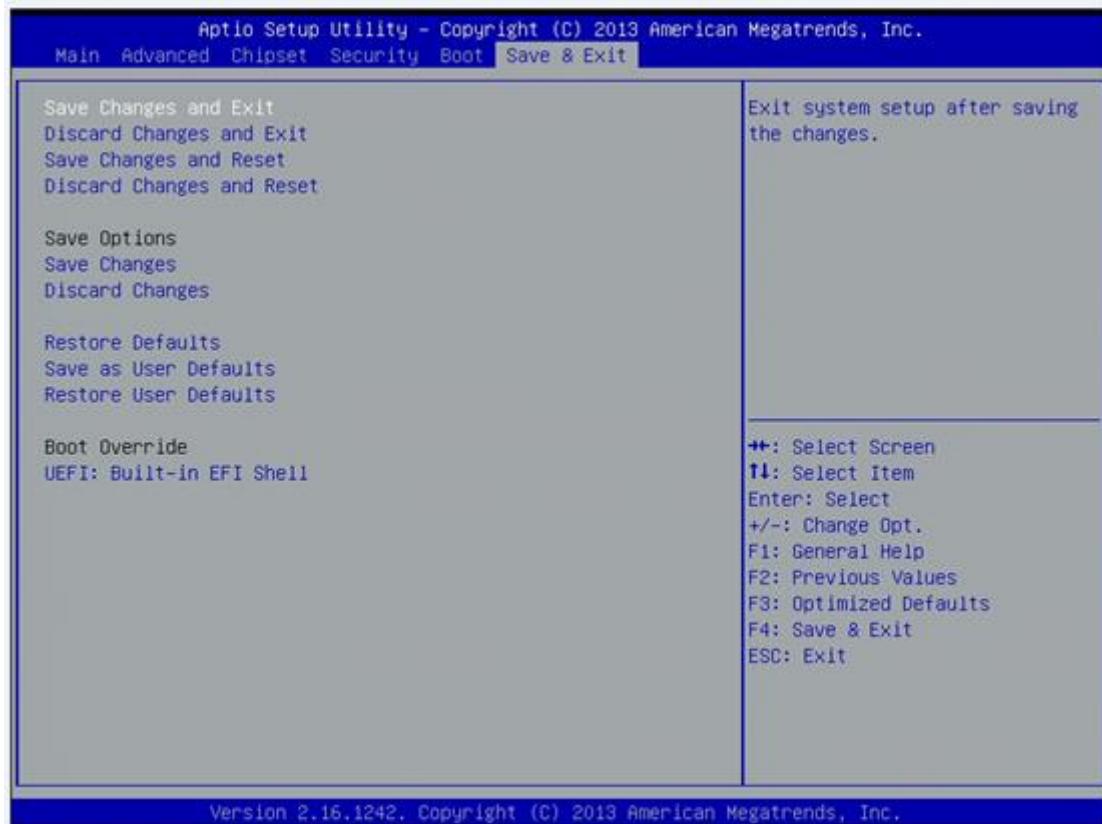
Legacy Pxe OPROM

Use this item to enable or disable the Preboot Execution Environment. The default setting is disable.

Boot Option Priorities

Specifies the overall boot order from the available devices.

3.7 Save&Exit



This page is intentionally left blank.

CHAPTER 4

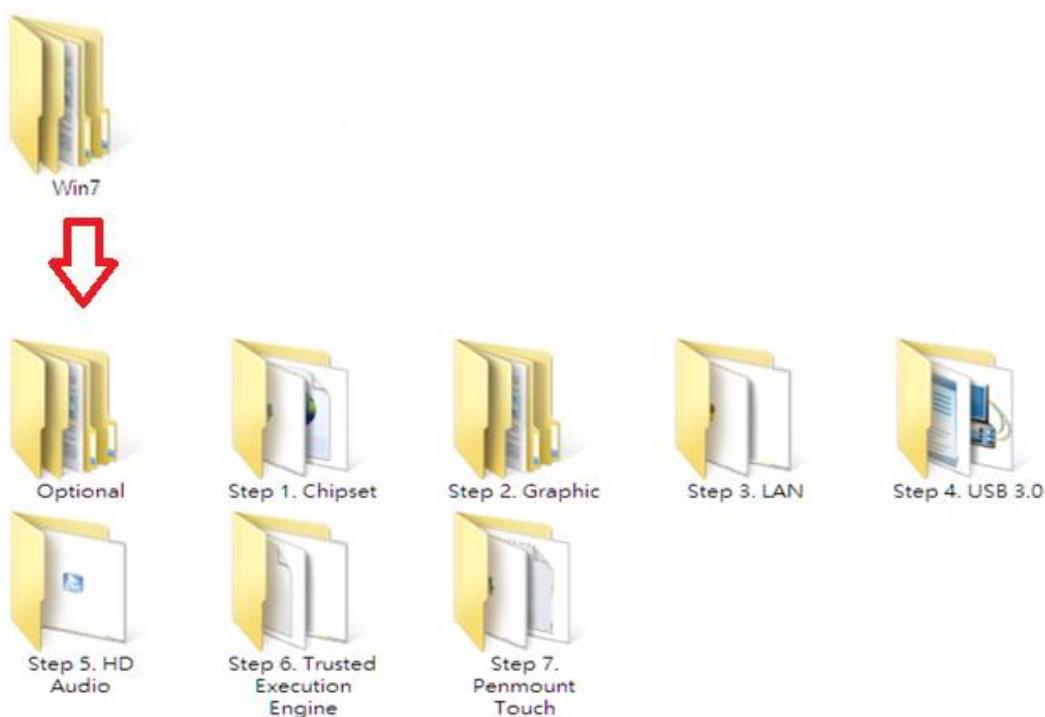
Drivers Installation

4.1 System

GOT812LR-834 supports Windows 7, Windows 8/8.1 ,WES 7 and WE8S. To facilitate the installation of system driver, please carefully read the instructions in this chapter before start installing.

4.1.1 Win 7

1. Insert Driver CD and select the “\Drivers”.



2. Select all files and follow the installing procedure.

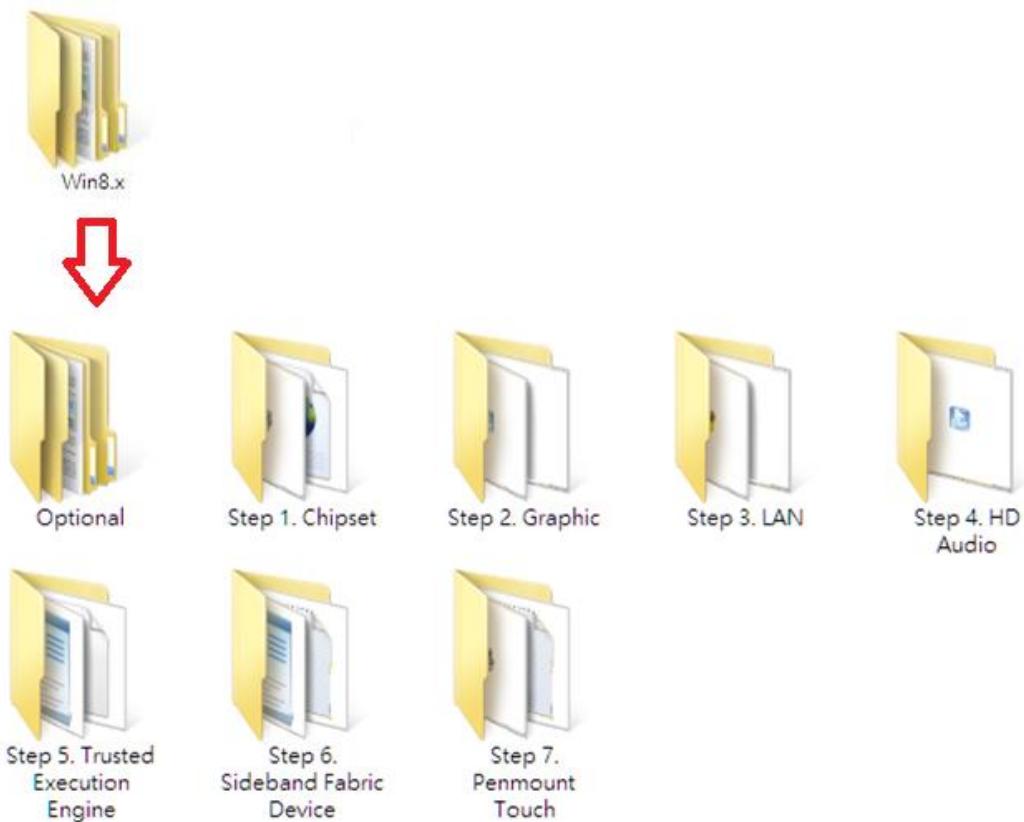


If you didn't install graphics driver, it only can be resumed via VGA display when VGA and DP go to sleep mode.

Note

4.1.2 Win 8/8.x

1. Insert Driver CD and select the “\Drivers”.



3. Select all files and follow the installing procedure.



If you didn't install graphics driver, it only can be resumed via VGA display when VGA and DP go to sleep mode.

Note

4.2 Touch Screen

The GOT812LR-834 uses the 5-wire analog resistive (flat front bezel type). There are the specification and driver installation which are listed below.

4.2.1 Specification

<u>Touch Screen</u>	<u>5-wire Analog Resistive type</u>
<u>Touch Screen Controller</u>	<u>PenMount 6000 USB Touch Screen Controller IC</u>
<u>Communications</u>	<u>USB interface</u>
<u>Resolution</u>	<u>1024 x 1024</u>
<u>Power Input</u>	<u>5V</u>
<u>Power Consumption</u>	<u>Active: 24.6mA / Idle Mode: 13.4mA</u>

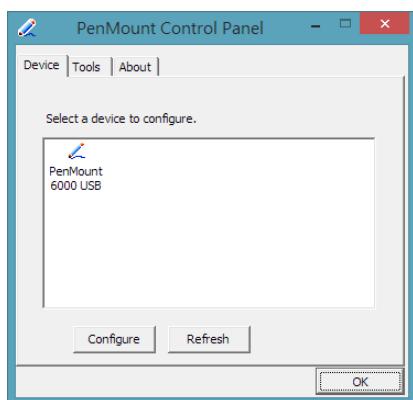
4.2.2 Driver Installation- Windows 7/8.x

The GOT812LR-834 provides a touch screen driver that users can install it under the operating system Windows 7/8.x. To facilitate installation of the touch screen driver, you should read the instructions in this chapter carefully before you attempt installation.

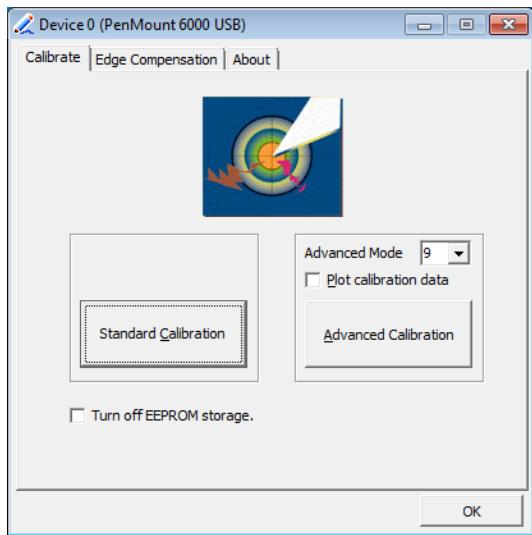
1. Insert Driver CD and follow the path to select the “\Drivers\Step 7 - Touch”.



2. Follow the installing procedure and press OK.
3. Click Start menu and select “PenMount Utilities”; and then, a “PenMount Control Panel” pops out.

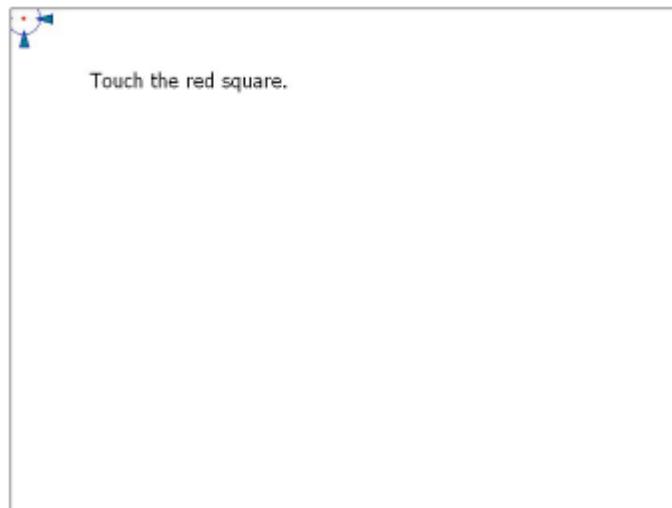


4. Select the “Standard Calibrate” tab.



5. Calibration:

To adjust the display with touch panel, click “Calibration” and follow the calibrate point to do calibration; there are five points on screen for calibration.



6. Press OK.

4.3 Embedded O.S.

The GOT812LR-834 provides the WES 7 and WE8S Embedded. The O.S. is supported devices which are listed below.

4.3.1 WES 7 & WE8S

Here are supported onboard devices:

- Onboard Multi I/O
- SATA HDD
- USB
- CRT/LCD display
- 10/100/1000 base-T Ethernet
- CFast™ or mSATA
- Onboard Audio
- Touch Screen

PenMount Touch screen

Before you can use and calibrate it, here is what you should do:

1. Set up Penmount touch device driver by executing C:\Penmount\ Windows 2000-XP V5.0\setup.exe. When the installation is finished, an icon “PM” appears on the Taskbar.
2. Calibrate Penmount touch by clicking on the “PM” icon, and then go on the calibration.
3. Restart the computer.

This page is intentionally left blank.